

What is claimed is:

1. An electric actuator comprising a driving force-transmitting belt for transmitting rotary driving force of a rotary driving source to a slider, and a tension-adjusting mechanism for adjusting tension of said driving force-transmitting belt, said tension-adjusting mechanism comprising:

10 a first member to which one end of said driving force-transmitting belt is connected;

a second member to which another end of said driving force-transmitting belt is connected and which is provided displaceably in an axial direction with respect to said first member;

15 an adjusting member which adjusts a distance between said first member and said second member; and

an elastic member which is provided between said adjusting member and said first member or between said adjusting member and said second member,

20 wherein said first member is fixed on said slider, and an axis of said adjusting member is disposed within a cross section of said driving force-transmitting belt perpendicular to said axis.

25 2. The electric actuator according to claim 1, wherein indication means is provided on said second member for displaying a displacement amount of said adjusting

member.

3. The electric actuator according to claim 1,  
wherein ends of said driving force-transmitting belt are  
5 engaged with engaging grooves formed on said first member  
and said second member corresponding to shapes of parallel  
teeth of said driving force-transmitting belt, and said ends  
are interposed between said first member and a first fixing  
member and between said second member and a second fixing  
10 member.

4. The electric actuator according to claim 1,  
wherein said second member has a pair of two branches near  
said first member, engaging holes are formed through said  
15 two branches, lock screws engage with said engaging holes  
and are screwed with said first member.

5. The electric actuator according to claim 1,  
wherein said first member has a pair of two branches near  
20 said second member, engaging holes are formed through said  
second member, lock screws engage with engaging holes and  
are screwed with said two branches.

6. The electric actuator according to claim 1,  
wherein said adjusting member comprises an adjusting screw  
25 which is screwed with said first member, and a plurality of  
insertion holes are formed in a circumferential surface of a

head of said adjusting screw.

7. The electric actuator according to claim 1,  
wherein center lines of one end and the other end of said  
driving force-transmitting belt and said axis of said  
adjusting member are arranged on a straight line.  
5

8. The electric actuator according to claim 1,  
wherein said first member has a fastening section, into  
which said driving force-transmitting belt is inserted, and  
10 a thickness of said fastening section is smaller than a  
thickness of a retaining section formed near said second  
member adjacently to said fastening section.

15 9. The electric actuator according to claim 1,  
wherein a fastening section, into which said driving force-  
transmitting belt is inserted, is formed on said second  
member, and a thickness of said fastening section is smaller  
than a thickness of a retaining section formed near said  
20 first member adjacently to said fastening section.

10. The electric actuator according to claim 1,  
wherein said first member and said second member are formed  
by pressing.

25  
11. An electric actuator comprising a driving force-  
transmitting belt for transmitting rotary driving force of a

rotary driving source to a slider, and a tension-adjusting mechanism for adjusting tension of said driving force-transmitting belt, said tension-adjusting mechanism comprising:

5           a first member which is installed to said slider and to which one end of said driving force-transmitting belt is connected;

10          a second member to which another end of said driving force-transmitting belt is connected and which is displaceable in an axial direction with respect to said first member;

15          lock members which are rotatably supported by said first member and said second member about support points of ends of said lock members; and

20          engaging members which are formed with step sections and which are installed to said ends of said driving force-transmitting belt,

25          wherein engaging sections of said lock members are engaged with said step sections by rotation of said lock members, and said driving force-transmitting belt is fastened to said first member and said second member by said engaging members.

12. The electric actuator according to claim 11,  
25 wherein said engaging sections are formed on said lock members, said engaging sections press said engaging members toward said driving force-transmitting belt by rotation of

said lock members, and said driving force-transmitting belt  
is fixed to said first member and said second member.

13. The electric actuator according to claim 11,  
5 wherein a tapered surface is formed on said engaging member,  
said tapered surface is inclined to be gradually wide in  
width in a direction from said step section to said driving  
force-transmitting belt.

10 14. The electric actuator according to claim 11,  
wherein first attachment flange sections and second  
attachment flange sections are formed on said first member  
and said second member, said lock members are rotatably  
supported on said first attachment flange sections and said  
15 second attachment flange sections, respectively, and a pair  
of pawls, which are inclined to approach one another in  
directions from said first attachment flange sections and  
said second attachment flange sections to a center of each  
of said first member and said second member, are formed,  
20 respectively.

15. The electric actuator according to claim 14,  
wherein a distance between said pair of pawls is smaller  
than a width of each of said lock members.

25 16. The electric actuator according to claim 11,  
wherein each of said lock members has a curved section which

has a substantially circular arc-shaped cross section and which is formed at an end opposite to an end at which said engaging section is formed.

5           17. The electric actuator according to claim 11, wherein said first member and said second member are formed by pressing.

10           18. An electric actuator comprising a driving force-transmitting belt for transmitting rotary driving force of a rotary driving source to a slider, and a tension-adjusting mechanism for adjusting tension of said driving force-transmitting belt, said tension-adjusting mechanism comprising:

15           a first member which is installed to said slider and to which one end of said driving force-transmitting belt is connected;

20           a second member to which another end of said driving force-transmitting belt is connected and which is displaceable in an axial direction with respect to said first member;

25           an adjusting member which adjusts a distance between said first member and said second member;

              an elastic member which is provided between said adjusting member and said first member;

              lock members which are rotatably supported by said first member and said second member about support points of

ends of said lock members; and  
engaging members which are formed with step sections  
and which are installed to said ends of said driving force-  
transmitting belt.

5           wherein an axis of said adjusting member is disposed  
within a cross section of said driving force-transmitting  
belt perpendicular to said axis, engaging sections of said  
lock members are engaged with said step sections by rotation  
of said lock members, and said driving force-transmitting  
10          belt is fastened to said first member and said second member  
by said engaging members.

19. The electric actuator according to claim 18,  
wherein said engaging sections press said engaging members  
15          toward said driving force-transmitting belt by rotation of  
said lock members, and said driving force-transmitting belt  
is fixed to said first member and said second member.

20          20. The electric actuator according to claim 18,  
wherein said adjusting member comprises an adjusting screw  
which is screwed with said first member, and a plurality of  
insertion holes are formed in a circumferential surface of a  
head of said adjusting screw.